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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,895	03/16/2004	William L. Mills	PALM-3802.PSI	5371

7590 10/01/2004  
WAGNER, MURABITO & HAO LLP  
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EXAMINER

YOUNG, BRIAN K

ART UNIT PAPER NUMBER

2819

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/802,895

Applicant(s)

MILLS ET AL.

Examiner

Brian Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-27 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim I is rejected under 35 U.S.C. 102(b) as being anticipated by Vaughn et al.

In FIG. 7 Vaughn et al show a data channel 0 from a disk drive. The first stage of the deskewing circuit is a serial-to-parallel converter 155. The operation of reading digital data into converter 155 and corresponding converters in other channels is initiated by master sequencer 160 issuing a read enable signal to the converters by way of line 166.

**The serial data for each channel along with a bit read clock signal on line 156 is input to serial-to-parallel converter 155.** The data input is a series of bits comprising a pixel. **The converter 155 forms a nibble composed of a predetermined number of bits such as 4 in this example,** that is, it repeatedly takes 4 successive bits of a pixel or other group of bits that may have been recorded and feeds the **nibbles** into a latch 157. The nibble is also input to a sync detector 158. The data coming from the disk is formatted into a specific form. A preamble of all zeros precedes any active data, followed by a known data pattern, namely the sync data word recorded in a sector field preceding active image data as is the regular way of detecting the start of user's data in Winchester type disk controllers. When the sync data is detected by detector 158 active data is present and a read sequencer 165 can begin latching the **nibbles** out of the converter 155. For every 4 read pixel rate clocks, converter 155 is controlled to latch in a new 4-bit nibble. The read sequencer provides the latch input clock by way of line

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167. Another clock by way of line 167 shifts the **nibbles** into a first-in, first-out (FIFO) memory 159. The FIFO memory is the elastic element between the multiple channels and is used to accommodate the skew. A master sequencer 160 using the index and sector timing pulses as a time base sends out clocking signals by way of line 162 at a fraction of bit rate frequency which is one-fourth of said frequency in this example, for effectuating transfer of the **4-bit nibbles** from FIFO 159 to parallel-to-serial converter 163. The master sequencer also sends out the same clocking signal to the sequencers and FIFOs in the other channels as indicated by the clock signal lines 168. Four bits in parallel come out of FIFO 159 on the respective lines 162.. The **4-bit nibbles**, now in synchronism with each other in all channels are converted to a serial bit stream and are output from parallel-to-serial converter on lines such as the one marked 164. The parallel-to-serial converter is clocked at a bit rate frequency by clock lines 161 from the master sequencer 160. This same clock line is routed to the other parallel channels as indicated by lines 169.

3. Claims 2-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


4. Claims 11-27 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Young whose telephone number is 571-272-1816. The examiner can normally be reached on Mon-Fri 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian Young  
Primary Examiner  
Art Unit 2819

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